

## MISCELLANEOUS NOTES

### 1. GRIZZLED GIANT SQUIRREL *RATUFA MACROURA* THOMAS AND WROUGHTON AT CAUVERY VALLEY IN KARNATAKA

The grizzled giant squirrel *Ratufa macroura* Thomas and Wroughton is an endemic species with a disjunct distribution in the peninsula. The species is known to be restricted to a small area of deciduous forests in the Srivilliputtur forests (Borges 1990, Ramachandran 1989) and Kudirayar valley (Davidar 1989) on the eastern slopes of the Western Ghats in Tamil Nadu. It has also been recorded in the Chin-nar Wildlife Sanctuary in Kerala (Ramachandran 1989).

However, during a trip to Muttatti (398 m above msl, 12° 18' N, 77° 18' E) a popular pilgrimage centre (c.120 km south of Bangalore) on the banks of river Cauvery, on 21 April 1991, we sighted a *R. macroura* on an *Albizia amara* tree. The spot is about half a kilometre upstream from Muttatti.

Muttatti falls within the Basavanabetta State Forest, which comprises of boulder strewn hills covered by dense mixed jungle with bamboo. The Cauvery river borders the State Forest on the southern side, where the riparian habitat is prevalent. Tree species dominating the riparian zone are *Terminalia arjuna*, *Tamarindus indica*, *Mangifera indica*, *Pongamia glabra*, *Albizia amara* and *Syzygium* sp.

On noticing our presence the squirrel tried to hide by pressing itself close to the branch and lying motionless. A little later, it began feeding on the tender leaves of *A. amara* and moved on to feed on the tender leaves of a neighbouring tamarind tree. In the meantime a second individual was spotted on another *A. amara* in bloom about 75 m from where the first individual was seen. In a short while the former joined the latter and both were observed pulling the blossoms with their forelimbs and feeding on the pollen without plucking the flower. The behaviour of taking the stamens into the mouth and pulling them out without actually damaging them indicated that the squirrels were feeding on the pollen of *A. amara*. Later one of them moved closer to the other and both started to nuzzle each other. One of the squirrels was observed chasing away a threestriped palm squirrel *Funambulus palmarum*

Wroughton which approached too close. It was also observed that one of the pairs of *R. macroura* was gnawing at the loose bark of an *Albizia* tree.

Two of us (SK and JNP) visited the place again with two others (G.S. Aditya and M.S. Jayanth) on 27 and 28 April 1991. On 27 April, we surveyed a stretch of approximately 6 km of the riparian zone between Muttatti and Bhimeshvari (404 m above msl; 12° 18' N, 77° 17' E). We came across 16 dreys, but only one individual about 4 km upstream from Muttatti village. On 28 April, we covered a stretch of 16 km downstream from Muttatti to Sangam (373 m above msl; 12° 17' N, 77° 26' E), the confluence of rivers Arkavathy and Cauvery. We came across one individual about 14 km from Muttatti and 19 dreys. Both the squirrels seen on 27 and 28 April appeared very shy, hiding themselves from our view and lying motionless on the branch for quite some time. The observations of Raja (1983) indicate that *R. macroura* is very vocal. However, all the four individuals we came across in the Muttatti area were silent. We also did not hear any calls in the area which could be those of any other *Ratufa* species.

Muttatti area is inhabited by Soliga tribals. On enquiring with a few Soligas, we learnt that the tribals regularly hunt *R. macroura* for meat. According to them, the squirrel is known to come down from trees to drink water from the river and at such times is particularly vulnerable. The squirrel, popularly known among the tribals as *Bettaluma*, is also known to inhabit the riparian zones on the opposite bank, which come under the Chikkayalur Reserve Forest. The habitat there too is similar to that of Basavanabetta State Forest. Possible predators of these squirrels could be the crested serpent eagle *Spilornis cheela* (Latham) and the grey-headed fishing eagle *Ichthyophaga ichthyaeetus* (Horsfield) which also inhabit the same habitat in the area.

Hitherto *R. macroura* has been recorded only in Tamil Nadu and Kerala; our sightings in the Muttatti area constitute the northernmost record of the species and also probably the first report from Karnataka.

More detailed surveys in appropriate habitats in

between Srivilliputtur forests, Chinnar Wildlife Sanctuary and Muttatti area may throw more light on the distribution and abundance of *R. macroura*. Such surveys may also help in identifying potential

habitats for protection.

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## REFERENCES

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## 2. ESTIMATION OF DENSITY OF IBEX *CAPRA IBEX* LINN. IN PIN VALLEY NATIONAL PARK, HIMACHAL PRADESH

(With a text-figure)

The Pin Valley National Park in Lahaul-Spiti district, Himachal Pradesh, was set up in 1987. Biogeographically, this area has been included in Zone 1B, i.e. the Tibetan Plateau (Rodgers and Panwar 1989). The mean elevation of the Park is 4250 m above sea level (Morgain 1975). There is virtually no information on the status of wildlife of this difficult terrain. The local Buddhist population does not shoot wild animals because of religious sentiment. The ibex *Capra ibex sibirica* is a major species in the Park. No density estimates exist for Himalayan ibex in its entire range.

In order to assess the status of wildlife in the Park, preliminary surveys were done during 1988-89. The surveys showed that ibex move downwards into the valleys after snowfall in late October or early November. By late October, the migratory graziers who come largely with sheep also leave the Park. Therefore, November was selected as being the best period for a census of ibex.

The Park was divided into seven census grids along the seven major rivulets (Fig. 1). Seven parties, each consisting of one observer (Wildlife Department personnel) and two labourers were allotted one census grid (or transect line). The length of the transects varied between 6 and 11 km and the breadth between 1 and 1.5 km. 500-750 m were scanned on either side of each transect, using 10 x 55 binoculars.

Practise censuses were carried out from 22 to 25 October 1989, and the actual census from 12 to 14 November 1989.

### RESULTS AND CONCLUSION

The observations made during the census are

shown in table 1.

TABLE 1

Name of the transect line (see Fig. 1)	Area covered (sq. km.)	Total No. of Ibex seen
(1) Kidul Cho up to Ula	11 x 1 = 11	7
(2) (i) Kidul Cho to Thango	6 x 1.5 = 9	46
(ii) Thango to Nakpozamba	6 x 1 = 6	Nil
(3) Thango to Debsa	7 x 1 = 7	46
(4) Khaminger to Kangla	8 x 1.5 = 12	33
(5) Larang pasture to Larang La and Tari Khango	10 x 1 = 10	21
(6) Chhochhden to Thangpat	11 x 1 = 11	21
(7) Chhochhden to Pradey-Chorak-Nimish Khango	10 x 1 = 10	Nil
Total =	76 sq. km	174

$$\text{Density of Ibex} = \frac{174}{76} = 2.29 \text{ (Ibex per sq. km)}$$

The average breadth of the valleys scanned (1 or 1.5 km) as mentioned above is a fact, visual estimation by the observers.

The results given above are purely based on actual observations and do not include any allowance for the unseen number of ibex in the survey area.

There was little chance of overlapping or double counting of ibex as the seven census grids were away from each other. At the time of compilation of data, the timing and sites of ibex sightings were taken into account to avoid double counting.

The area surveyed during census (76 sq. km) is 11.26% of the total area (675 sq. km) of the Pin